



DoD Storm Water Policy

*Environment, Energy and Sustainability
Symposium & Exhibition
Denver, CO*

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Office of Deputy Under Secretary of
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Outline

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1. Leadership in Energy and Environmental Design Requirements
2. Low Impact Development Efforts
3. Section 438 of the Energy Independence and Security Act (EISA) of 2007
4. Executive Order 13508 – Chesapeake Bay Protection and Restoration
5. Executive Order 13514 – Federal Leadership in Environmental, Energy and Economic Performance
6. EPA EISA 438 Guidance
7. DoD Policy



Leadership in Energy and Environmental Design

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- **LEED**

- *Internationally recognized green building certification system*
- *Developed by US Green Building Council*
- *Promotes whole building sustainability approach through energy savings, water efficiency, materials management, and air emissions*

- **Storm Water Applications**

- *Storm water quantity and quality control*
- *Increased water efficiency*
- *Improved energy performance*



Low Impact Development (LID)

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- Minimizes the impact of development by mimicking pre-development hydrology runoff
- Uses site planning and management practices to store, infiltrate, evaporate, and detain runoff
- Benefits
 - Reduces flooding by reducing runoff volume
 - Improves water quality
 - Reduces impact on wildlife and aquatic habitat
 - Recharges groundwater supply
- DoD Unified Facilities Criteria on LID (UFC 3-210-10)
 - provides planning, design, construction, sustainment, restoration & modernization criteria to Military Department



EISA Section 438

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- **Energy Independence and Security Act (December 2007)**

Title IV - Energy Savings in Federal Buildings and Industry

Section 438 - Storm Water Runoff Requirements for Federal Development Projects

- **Requirement –**

“The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow.”



EO 13508

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- Chesapeake Bay Protection and Restoration (May 2009)
 - Created Federal Leadership Committee
 - Development of Federal efforts to support Bay restoration
- Storm water initiatives
 - EPA development of best practices for Federal land management activities
 - DoD and Federal agencies lead to improve storm water management on Federal lands
- Federal Leadership Strategy (May 2010)
 - Develop policy for implementing EISA 438
 - Conduct storm water opportunity assessments
 - EPA initiate national rulemaking for 2012 completion



EO 13514

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- Federal Leadership for Environmental, Energy, and Economic Performance (October 2009)
 - Increase energy efficiency, reduce greenhouse gases, conserve water resources, reduce waste, use sustainable products, and promote high performance sustainable buildings
- Storm water provision
 - EPA to issue technical guidance on EISA 438 (Dec 2009)
 - Implement EISA 438
- Strategic Sustainability Performance Plan (June 2010)
 - Track compliance with EISA 438



EPA EISA 438 Guidance

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- Consulted with DOE's Interagency Sustainability Work Group and other Federal agencies
- Per EO 13514, issued final guidance in December 2009
- Storm water guidance includes:
 - two performance options to maintain or restore site hydrology
 - examples of determining METF
 - tools for implementation
 - case studies



DoD Storm Water Policy

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- DUSD(I&E) issued policy on implementing storm water requirements under EISA Section 438 on January 19, 2010
- General Provisions:
 - Applicability
 - Defined predevelopment hydrology and METF
 - Design objectives
 - Established implementing requirements



DoD SW Policy - Applicability

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- Footprint – new or expanded construction projects 5,000 square feet or larger
- Horizontal surfaces for buildings and pavements to include roads, parking lots, and sidewalks.
- Not applicable for internal renovations, maintenance, or resurfacing of existing pavements



DoD SW Policy – Design Objectives

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- Maintain predevelopment hydrology defined as pre-project hydrologic conditions for temperature, rate, volume, and duration of storm water flow
- No-net Increase in storm water runoff
- Redevelopment projects consider restoring natural hydrological site conditions to extent practical
- Determine predevelopment hydrology using site specific factors such as soil type, ground cover, and slope.
- Availability of off-site options



DoD SW Policy - Limitations

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- Look at incorporating accepted and reasonable storm water LID technologies subject to site constraints and regulatory requirements (METF).
- Examples of METF include:
 - Restricting soil types
 - Limited space requirements
 - Structural limitations
 - State or local restrictions
 - DoD security constraints



DoD SW Policy - Implementation

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- Implement immediately as practical
- Document separately project costs in DD Form 1391 for EISA 438/LID requirements
- Conduct post construction analysis to validate project storm water features
- Count on reporting as required by EO 13508 and EO 13514
- Unified Facilities Criteria update due June/July 2010



DoD Policy Summary Chart

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Flowchart for EISA 438 Implementation

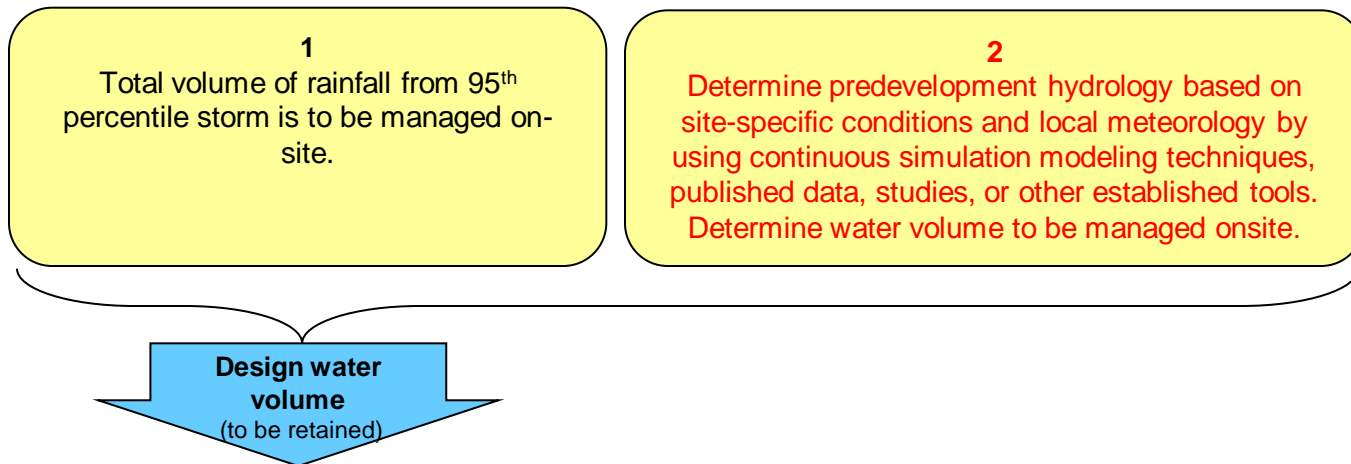
1. Determine applicability

Requirement: apply to all Federal projects with a footprint greater than 5,000 square feet

2. Establish design objective

Requirement: maintain or restore predevelopment hydrology

OPTIONS

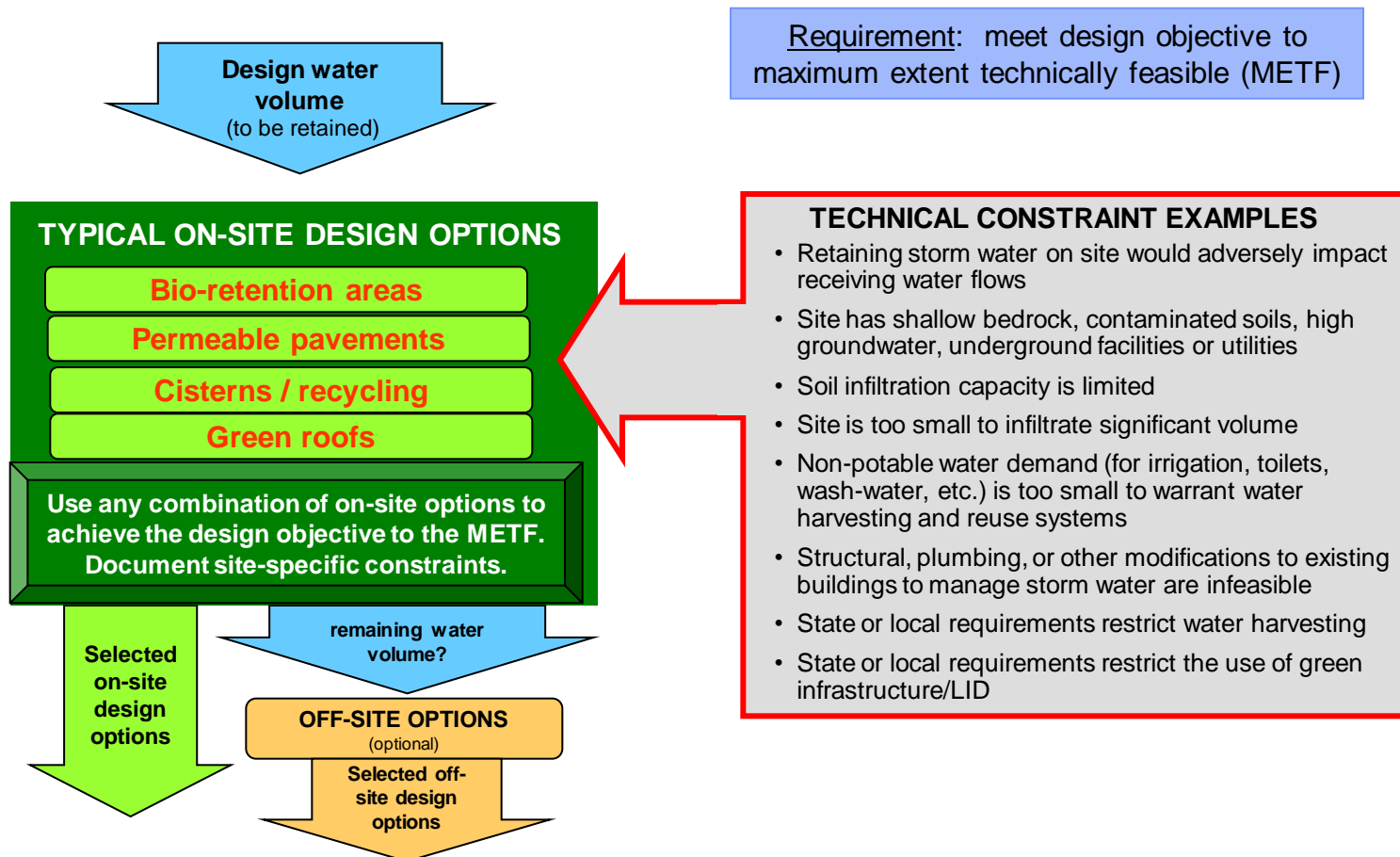




DoD Policy Summary Chart (cont'd)

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3. Evaluate design options



4. Finalize design and estimate cost



Questions?